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WASHINGTON, D. C. 20024

SUBJECT: Trip Report: Fifth Annual AIAA
Meeting, Philadelphia, Pennsylvania,
October 23, 1968 - Case 610

DATE: October 29, 1968

FROM: A. B. Baker

MEMORANDUM FOR FILE

The writer attended the technical session on Earth Resources at the Fifth Annual AIAA Meeting in Philadelphia on October 23, 1968. Though all of the papers were concerned with the application of orbiting spacecraft to the improvement of earth resources utilization, they were quite varied in scope. Two of the five papers were concerned with specific instrumentation: one presented a comparison of multispectral imaging devices and the other discussed the application of microwave sensors to hydrology. The remaining three papers were concerned with the broader aspects of utilizing aerospace technology to improve the management of earth resources.

Of particular interest was a technique described by Dr. R. A. Summers/OMSF for improving the planning of research and development efforts so that future technological advancements will be more directly responsive to user requirements. * The technique utilizes a case study approach whereby a number of satellite-assisted information systems are synthesized and projected for some operational time frame. An estimate is made of the impact of each of the systems enabling the more promising approaches to be identified. R and D efforts are then directed toward advancing the technological state-of-the-art to the point where these approaches are realizable.

Later in the day, the writer met Mr. Marvin Clarke, Project Manager for NASA Manned Programs at General Electric's Missile and Space Division. Mr. Clarke has directed a number of space station studies and has had occasion to use the AMPROD computer program (developed at General Electric's Apollo Support Division in Daytona, Florida) for mission scheduling and time-lining. He has found the program quite useful and offered to send me a copy of a recent GE proposal which contains a description of the program.

* R. A. Summers et al, "The Use of Economic Benefit Analysis in Developing Applied Research and Development Guidelines for Future Earth Application Satellite Systems" - AIAA Paper #68-1077 (NASA-CR-73573) TRIP REPORT - FIFTH ANNUAL AIAA MEETING, PHILADELPHIA, PENNSYLVANIA, 23 OCTOBER 1968 (Bellcomm, Inc.) 2 p N79-72920

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Mr. Clarke also described a Remote Sensing Simulator which was built by GE-MSD to investigate the astronaut's ability to perform tasks requiring recognition of terrestrial targets from a spacecraft. Using Gemini photographs, the device studies the speed of target recognition under various task loads with the timing, magnification, and cloud cover conditions that would be encountered in a "real-life" situation.

Mr. Clarke invited me to see the simulator in operation. However it has only recently become operational and the technical staff is currently in the process of checking it out and defining the tasks to be simulated. We agreed that it would be better to delay the visit until the operating characteristics have been better defined.



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